



2<sup>nd</sup> EBM Conference - Faculty of Medicine IUG

المؤتمر السادس لكلية الطب  
بالمجامعة الإسلامية - غزة

Evidence Based Medicine

“Reality and Aspirations”

الطب المنسد بالبراهين

“الواقع والتطبيقات”



## وحدة الطب المسند بالبراهين

PAL Evidence Based Medicine

## PAL EBM Unit

 (970) 82644400

 (970) 82644800

 [www.lugaza.edu.ps](http://www.lugaza.edu.ps)

✉ Medicine@iug.edu.ps

## Introduction:



Evidence-Based Medicine (EBM) has emerged as an effective strategy to integrate best available evidence into decision-making during clinical practice alongside patient values and clinical expertise.

The term EBM was coined more than 25 years ago by Professor David Sackett, who is widely recognized as the father of EBM, but he was then confronted by tough criticism in advancing the cause of EBM during the early nineties. But with persistence and dedication this new notion and philosophy in the practice of medicine started to find its way first in the developed and rich countries like the UK and then slowly towards other developing countries with limited resources like Palestine.

The EBM Unit of the Faculty of Medicine at the Islamic University, Gaza has been working in teaching and promoting EBM since 2009 through a series of lectures and workshops with the great effort and input by the unit head Dr. Khamis Elessi. Clinical audit is considered as an essential part of evidence based Practice as well as a tool for quality improvement in healthcare. It provides the opportunity for any healthcare team to assess their services against set standards and make improvements as necessary.

As further development of the work in EBM, over the last 2 years, all students in Year 5 are planning, conducting and presenting audit projects under the guidance of Dr. Bettina Böttcher. This supports the students' understanding of the process of clinical audit and development of skills in quality improvement of healthcare. From the very start of this work, it has been greatly supported by the staff, doctors, nurses and midwives under the leadership of Dr. Abdulrazaaq Al-Kurd, Dr. Omar Bahnasawi and Dr. Waleed Afana at Helal al-Emirati Hospital, Rafah. It was due to this team of healthcare professionals and their willingness to engage in this process, that students could develop their skills in the area of Clinical Audit and Quality Improvement in Healthcare.

Since then these efforts have been taken up and welcomed to other healthcare settings and have met great support by many doctors across Gaza.

However, without the enthusiastic attitude and fantastic work of students, this rapid dissemination of awareness and skills would not have been possible.

It is with great pleasure for the Faculty of Medicine of the Islamic University to present this booklet of some completed students audits of the Faculty in different healthcare settings.

Further information on clinical audit, is available on the Faculty website. We, at the Faculty of Medicine, are also always happy to help and support any future audit projects planned in healthcare settings in the Gaza-Strip.



**Dr. Fadel N. Naim**  
**Chairman of the conference**  
**Dean of Faculty of Medicine**

## **A historical perspective of EBM Evolution in Gaza Strip-Palestine**

Evidence-Based Medicine (EBM) has emerged in the nineties first in McMaster University-Canada, then to Oxford University in the United Kingdom as an effective strategy to integrate best available evidence into decision-making during clinical practice alongside patient values and clinical expertise.

In developing countries like Palestine, the introduction of such advanced philosophies in the education and practice of medicine has taken much longer and we in Palestine were lucky to be among the few Arab countries who have introduced EBM concepts into their medical curricula like Syria and Saudi Arabia.

### **Why Evidence-Based Medicine in Palestine?**

- EBM helps clinicians adopt interventions that are more likely to benefit their patients and like other developing countries, Palestine faces many problems including Modest health care system; Fragmented health providers, interventions supported by weak evidence and Inconsistent quality of care.
- The above mentioned reasons were further aggravated by relentless occupation, and the ongoing siege imposed on Gaza since 2006 which add misery to the already miserable situation.
- However, such challenges cannot be used as an excuse for failing to promote the use of reliable evidence to inform decisions in health care. But instead and with our strong belief that Palestine needs EBM for the same reasons that it is needed elsewhere,
- Prior to 2009, The principles of EBM were not widely appreciated in Palestine, so some initial steps to attract professionals towards EBM in Gaza were taken through a series of lectures and workshops that were organized by the EBM Unit- at the Faculty of Medicine-Islamic University- Gaza.

Such educational steps succeeded in generating some interest in EBM and at least neutralize some challenges, and therefore we decided to take additional but bigger steps in order to promote EBM to a wider audience and help integrate it into day-to-day clinical practice.

In fact, since our first EBM promotion classes to our medical students in 2009, the EBM unit has conducted more than 9 workshops that covered EBM concepts and Practice, plus Clinical Auditing. It has participated in many local & international conferences.

### **Why an EBM conference?**

This conference is the 6<sup>th</sup> for our faculty and the 2<sup>nd</sup> under this unique title.

The decision to organize this conference was based mainly on the large amount of recommendations and appreciation given for the 1<sup>st</sup> conference which was held at the Islamic University (October 25-26, 2013). The conference covered 15 different medical practices (local practices) in the Gaza Strip hospital. The current local practices were all audited by different specialty committee members and then compared against best available evidence (International EBM guidelines) and then, they were thoroughly discussed in specialized workshops followed by agreed recommendations to improve our local practice.

### **Objectives of the 2<sup>nd</sup> EBM Conference which will be held on the 28<sup>th</sup> and 29<sup>th</sup> of this October 2016 are:**

- To further promulgate the principles of EBHC in Palestine to a wider audience of health professionals.
- To raise awareness about the need to do practice appraisal and the need to audit our clinical practice regularly.
- To compare our current professional knowledge in new 15 areas of clinical practice in the Gaza strip hospitals and audit it against the best available evidence
- To set a number of recommendations on how current local practice can be improved.

**Finally, we wish you a happy and fruitful time with us**

**Dr. Khamis Elessi  
Head of EBM Unit  
Faculty of Medicine - IUG**



## Administration of the Conference

<b>Chairman of the Conference:</b>	Dr. Fadel N. Naim
<b>General Coordinator of the Conference:</b>	Dr. Khamis Elessi
<b>Head of Scientific Committee:</b>	Dr. Anwar Sheikh Khalil
<b>Head of Preparatory Committee:</b>	Dr. Hany Ferwanah

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<b>Dr. Khamis Elessi</b> <b>Consultant in Neuro Rehabilitation</b> Head of EBM Unit, Islamic University, Gaza
<b>Dr. Shireen Abed</b> <b>Consultant in Paediatrics</b> Lecturer Islamic University, Gaza
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<b>Dr. Abdelrazaaq Al-Kurd</b> <b>Consultant in Obstetrics and Gynaecology</b> Consultant of Ministry of Health

## International Speakers



### **Dr. Ammar Daoud**

Jordan University of Science and Technology Amman, Jordan

What's Wrong with Medical Research?  
Causes and Solutions –  
The Reproducibility Crisis



### **Mr. Nick Maynard**

Consultant Upper GI Surgeon  
Oxford, UK

Surgical Management of Benign  
Oesophagogastric Disease



### **Sir Iain Chalmers**

Co-Founder of Cochrane Library Editor of  
James Lind Initiative Oxford, UK

How might Palestine take advantage about what  
has been learned about avoidable  
waste in research?



### **Mr. Richard Guy**

Consultant Colorectal Surgeon  
Oxford, UK

Evidence Based Surgery For Inflammatory  
Bowel Disease.

## International Speakers



### Dr. Andrew Wilkinson

Consultant Neonatologist Oxford, UK Emeritus  
Professor in Paediatrics, University of Oxford, UK

What has Cochrane Done for  
Neonatal Medicine?



### Dr. Adam Bailey

Consultant Gastroenterologist  
Oxford, UK

Acute Upper GI Bleeding.



### Dr. Jane Crawley

Consultant in Pediatrics, University  
of Oxford, UK

Fluid management of the sick, febrile  
child: the FEAST trial controversy.

# EMERGENCY CAESAREAN DELIVERIES in the Gaza Strip: A CLINICAL AUDIT of delivered care

Msallam M. Abu khilil<sup>1</sup>, Osama Mehjez<sup>1</sup>, Lutfi Alankah<sup>1</sup>, Mohammed Abuyusuf<sup>1</sup>, Salah Hasan<sup>1</sup>, Bettina Bottcher<sup>2</sup>

1) Medical Students at the Islamic University, Gaza

2) Lecturer at the Islamic University, Gaza

## Background

The role of caesarean deliveries in developing countries is challenged by limited resources, less effective training of workforce, poor transport facilities and reduced compliance to the international standards of care in comparison with developed countries. The prior factors contribute to the high maternal and perinatal mortality. The development of the quality of obstetric care becomes an urgent priority in the developing countries. This will, therefore, mandate regular clinical audits and revisiting of management strategies and techniques.

## Objective

This clinical audit was to examine the management given to patients undergoing emergency caesarean sections (CS), with especial note of the decision to delivery time interval (DDI), and comparing this to the internationally acceptable standards. It was aimed to be used for developing standard operating procedures for emergency CS in order to improve the care offered to women undergoing emergency caesarean sections.

## Methods

This was a descriptive retrospective clinical audit based on available data from patient medical records within the timeframe of 1 – 31 October 2015 from Emirati Obstetric Hospital (EOH). The notes were retrieved from the archive. The hospital is a nationally dedicated hospital for obstetric care and gynecological management and also a teaching hospital. The hospital cares for patients from the Rafah district of the Gaza strip, Palestine. The audit included patients delivered by emergency caesarean section at EOH within 1 – 31 October, 2015.

It was only possible to identify 20 patients with emergency CS during this time, which lies significantly below the expected number

## Results

This audit revealed documentation of items such as age, gestational age at time of delivery, type of anesthesia and perinatal outcome in 20 of the 20 cases, almost 100%. However, other important information such as the time of the DDI was not recorded in any of the medical records of the 20 cases. Therefore it was not possible to determine the decision to delivery intervals for these caesarean sections. As a result no comparison could be made to international standards on the provision of emergency caesarean sections.

## Discussion

This audit reveals the extreme weaknesses in the standard of medical record keeping at the Emirati Hospital, probably as an expression of a culture of suboptimal medical record keeping across the Gaza Strip. However, in order to perform meaningful clinical audits, accurate and complete medical records are necessary to assess the standard of care delivered in a healthcare center. Clinical audit as a tool for quality improvement in healthcare is not used in Gaza. In fact, this was among the first such processes undertaken in the Gaza Strip. As this it was a very valuable first step. This audit highlights the need for all doctors and healthcare organizations in the Gaza Strip to clearly develop protocols or mechanisms to improve documentation and record keeping. Secondly, to identify the factors contributing to the non-compliance with internationally recommended DDI, in order to build mechanisms of improving the quality of care.

## Infection control measures in practice:

### A clinical audit on two neonatal intensive care units in Gaza Strip.

Al Rumi N<sup>1</sup>, Aghalkurdi M<sup>1</sup>, Habib H<sup>1</sup>, Böttcher, B<sup>2</sup>, Abed S<sup>3</sup>, Shurrob S<sup>3</sup>, Jobara A<sup>3</sup>

1) Student at the Islamic university, Gaza

2) Assistant professor at the Islamic university, Gaza

3) Consultant Pediatrician

#### Background

The infection control program is simple, low-cost, low-technology intervention to reduce the incidence of septicemia, mortality rates and irrational antibiotic use in NICU. The most common cause of mortality in NICU is neonatal infection. Infection control programs have an essential role in preventing Late Onset Infection in NICU.

#### Objective

The aim of this audit is to assess how much NICU teams adhere to the infection control measures requested in the protocols of the Ministry of Health.

#### Methods

This audit is a prospective observation-based study. It was conducted in two Neonatal Intensive Care Units over a period of 3 months (June – August 2016). It includes 100 observations (50 doctors & 50 Nurses). The study evaluates preparations made by healthcare personnel before entering the NICU and adherence to infection control protocol steps in both minor and major procedures. Verbal informed consent was taken from the head of the unit. The data was collected on data collecting sheets which had been designed according to the procedures protocol used in NICU in Gaza Hospitals.

#### Results

The overall compliance rate in the general infection control measures done when handling the patients in NICU was 46%. A total of 54 cases were minor procedures, in which the overall compliance was 48.7% (46% scrubbing and handwashing, 30% glove usage and 84% applying antiseptic).

Moreover, in a total of 17 major procedures done in the NICU, the overall compliance was 53% (35% used sterile technique, 59% scrubbing and hand washing and all cases used gloves).

There were major differences found in hand washing, scrubbing, wearing gown and applying antiseptic between both hospital sites.

### Interpretation

This Audit assesses the use of infection control precautions in two NICUs in the Gaza strip. A previous audit at an obstetric unit in Gaza reported handwashing compliance to WHO goals to be 24% in total<sup>(1)</sup>. This is clearly below the 46% demonstrated in this audit. A reason for this can be the training in infection control at all NICUs in Gaza with MAP-UK cooperation. This result is in concordance with a Netherlands study which showed an increase in adherence to infection control measures from 23% to 50% following staff training<sup>(2)</sup>. Therefore, further training along with clear guidelines and leadership are effective and essential to improve infection control measures in practice. This has to be followed by a re-audit with a longer observation time and inclusion of sepsis rates.

### Reference

- 1 Khalidy K et al (2016) Handwashing: An audit of clinical practice. Unpublished results.
- 2 Van den Hoogen et al Improvement of adherence to hand hygiene practice using a multimodal intervention program in a neonatal intensive care. J Nurs Care Qual. no.1 (2011):22- 9. doi: 10.1097

# **Audit of Antibiotic use after suturing in EGH – Emergency department , Gaza Strip , Palestine**

Afana , S<sup>1</sup> ; Al-Hindawi , M<sup>1</sup> ; Zaiter , H<sup>2</sup> ; Bottcher , B<sup>3</sup>

- 1) Senior medical student, IUG Medical School
- 2) Consultant of Emergency medicine
- 3) Assistant professor, IUG medical School

## **Background**

Skin wounds and injuries are a common encounter in the emergency department. Generally, you have two types of patients presenting with skin wounds. Children with accidental injuries and adults with conflict related injuries. Such wounds could be clean or not and no local guideline exists to address the question of when antibiotics should be prescribed in Palestinian hospitals. Antibiotics are not indicated for uncomplicated wounds. Instead cleansing of the wound is essential to prevent infection. Overuse of antibiotics increases the risk of antibiotic resistance and poses a great risk for antibiotic effectiveness in the future. Therefore finding the right balance of use is of great importance.

## **Objective**

The purpose of this audit is to evaluate the current practices regarding the prescription of antibiotics for skin wounds after suturing and understand possible factors to affect such a decision in EGH , Gaza Strip – Palestine .

## **Methods**

A formal simple questionnaire was filled in by staff at the emergency department at European Gaza Hospital (EGH) in Gaza. The questionnaire included demographic questions about age, gender, and address. Additionally, the wound's size, and type of antibiotics if were prescribed, were noted.

## **Results**

50 patients were included in this study, with 32 males and 18 females. Average age was 12. The mean size of the sutured wound was significantly larger for the patients who got antibiotics (4.69 vs 2.00, p-value = 0.0001).

Fisher's exact test was used to study gender as a factor for prescribing antibiotics, with female gender being a significant determinant (p-value = 0.005). The site of the wound was not a significant factor in our analysis most likely due to a small number of patients in each subgroup. Finally, we found that patients who received Keflex were significantly younger than those who received Ogmin.

### Interpretation

The decision to prescribe antibiotics at EGH is highly dependent on the suture's size. The fact that 97% of female patients received antibiotics points towards a subjective decision that is based on a common belief among Palestinians that antibiotics would result in a faster scarless healing process. This is a stark example of the paucity of evidence based use of antibiotics in the Gaza Strip. Previous audits in other areas have also shown a non evidence based approach to the prescription of antibiotics (1,2). Therefore, the development and implementation of local guidelines for the use of antibiotics has to be a priority for the Palestinian hospitals and Ministry of Health.

### Reference

- 1 Alyacoubi, S et al (2016) Antibiotic prophylaxis in caesarean section. 1st Al-Helal Al-Emirati Hospital (Al-HEH), Gaza Strip, Palestine: A clinical audit.  
[www.onlinelibrary.wiley.com/wol1/doi/10.1111/1471-0528.14115/full#bjo14115-sec-0007](http://www.onlinelibrary.wiley.com/wol1/doi/10.1111/1471-0528.14115/full#bjo14115-sec-0007)
- 2 Abu Nemer, H et al (2016) Management of UTI in Pregnancy. Unpublished Results.

# The Management of Antepartum Haemorrhage at Al-Helal Al-Emirati Hospital (Al-HEH) in Gaza Strip: A Clinical Audit

Elshami, M<sup>1</sup>; Alnirab, A<sup>1</sup>; Alramlawi, O<sup>1</sup>; Alkronz, M<sup>1</sup>; Alaloul, E<sup>1</sup>; Zourub, H<sup>2</sup>; Bottcher, B<sup>3</sup>

1) Medical Student, Faculty of Medicine, Islamic University, Gaza

2) Consultant Obstetrician at Al-HEH

3) Assistant Professor, Faculty of Medicine, Islamic University of Gaza

## Background

Antepartum haemorrhage (APH), defined as bleeding from the genital tract in the second half of pregnancy, remains a major cause of perinatal mortality and maternal morbidity in the developed world.

The appropriate evaluation and management of APH is critical for the well-being of both the mother and the fetus who present with APH. Local guidelines developed by the Palestinian Ministry of Health (M.O.H) in 2006 are intended to help clinicians in this.

## Objective

This audit aimed to assess the actual management of women presenting with APH to Al-HEH and compare this to the required standards in the M.O.H. guidelines.

## Methods

This is a descriptive retrospective clinical audit using data collection sheets that were filled in based on the available information selected within the timeframe of October to December, 2015 at Al-HEH.

## Results

In total, 50 cases were identified. The mean age was 28 years and mean duration of hospitalization was 3.5 days. Most patients (62%) were multipara. Only 30% of cases had a previous history of cesarean delivery as a risk factor. However, 32% had no identifiable risk factors for APH. It was clear that 56% had unexplained APH and 30% were diagnosed as placenta praevia.

All of the vital signs, complete blood count, giving anti-D and cardiotocography were fully obtained (100%), as requested in the guidelines.

Only 26 cases (52%) needed a delivery: 35% of them had a cesarean section. However, it was surprising that a speculum examination was not done in 98% of patients.

In addition, 14% did not have an ultrasound scan for localization of placenta. Moreover, the coagulation profile and blood crossmatch were only done in 42% and 60% of cases, respectively.

The vast majority of patients (98%) were hemodynamically stable and did not receive any blood transfusions. Induction of labor was only performed in 12 cases (24%). Despite the consensus that tocolysis is not indicated in APH, it was given to 9 women (18%). On the other hand, corticosteroids were not given to 22% of cases below 34 weeks.

### **Interpretation**

This audit shows mixed adherence to local guidelines in the investigations and management of APH. Some important steps are completed in all cases (FBC, CTG, vital signs) whereas others in only 2 – 22% (corticosteroid administration, speculum investigation and placental localization on ultrasound). Some of this might be a result of poor documentation and a specific sheet for the medical file to record results can significantly improve documentation.

However, these results as well as the fact that tocolysis was given to 18% of women presenting with APH, which is at best ineffective, but potentially dangerous practice, demonstrates significant lack of evidence based medicine practice.

Therefore, there is an urgent need for updated local guidelines as well as promoting awareness and knowledge of evidence based practice among clinicians.

# Management of Gestational Hypertension: A Clinical Audit of clinicians' adherence to the NICE guidelines performed at Helal Al-Emairati Maternity Hospital, Rafah, Gaza-Strip, Palestine

Abuowda Y<sup>1</sup>, Behzed <sup>1</sup>, Bottcher B<sup>2</sup>

1) Intern Doctors, Ministry of Health, Gaza-Strip

2) Assistant Professor, Islamic University, Gaza

## Background

Gestational Hypertension is defined as systolic blood pressure  $\geq 140$  mmHg and/or diastolic blood pressure  $\geq 90$  mmHg in a previously normotensive pregnant woman who is  $\geq 20$  weeks of gestation and has no proteinuria. The blood pressure readings should be documented on at least two occasions at least six hours apart and it should return to normal by 12 weeks postpartum. Gestational hypertension occurs in about 6% of pregnancies. In severe cases it is associated with preterm delivery, small for gestational age infants, fetal growth restriction and abruptio placentae and it may develop to Preeclampsia in 15 to 25%.

## Objectives

The aim of this audit was to assess the clinicians' adherence to NICE Guidelines in Management of Gestational Hypertension at Al-Helal Al-Emairati Maternity Hospital, Rafah, Gaza Strip.

## Methodology

In total, 20 women were selected randomly from all admitted cases during the period from 1st January to 15th April 2015, at Al-Helal Al-Emairati Maternity Hospital with a diagnosis of Gestational Hypertension, data was collected through reviewing patients' records retrospectively using an audit proforma. Then it was analyzed using EXCEL program for age, parity, gestational age, and implementation of NICE guidance.

## Results

The mean age was 31.05 years and the mode was 38 years (four cases). For parity, the mean was 2.4 and the mode were 1 and 3 (five cases for each). As for the gestational age, the mean was 37 and the mode was 38 (six cases).

The severity of HTN was mild in 18 cases (90%) whereas 2 (10%) were moderate cases. There were no severe cases. Finally, the overall management was in concordance with NICE guidelines in a total of 74.4% of cases with 76.3% of the mild cases and 56.25% of the moderate cases managed according to the guidelines.

### **Conclusion & Recommendations**

This AUDIT showed that adherence to the NICE guidelines in Management of Gestational HTN at Al-Helal Al-Emairati Maternity Hospital, Rafah, Gaza Strip was overall 74.4%. 5 out of 20 (25%) cases were primiparous at the time of diagnosis.

The main identified weakness in management was a lack of testing for proteinuria at each visit.

This audit illustrates the urgent need for development and implementation of a local guideline on management of Gestational Hypertension. A clinical guideline clarifies expected management for all clinicians and streamlines the overall approach. Therefore, guidelines assist clinicians in their management and ensure patient safety.

Specific weak points found in this audit were the paucity of adequate investigations and choice of firstline antihypertensive. Therefore, this guideline has to include the following points:

- Measuring Blood Pressure at least twice weekly.
- Testing for Proteinuria at each visit.
- In moderate & severe cases:
  - treat with labetalol,
  - routine antenatal blood tests at each visit (CBC, Kidney function, electrolytes, transaminases and bilirubin)

# Poor Documentation: A Recurring Theme or A Clinical audit on Management of Ectopic Pregnancy

Bashity B<sup>1</sup>, Awadalla S.<sup>1</sup>, Shehabir H.<sup>1</sup>, Al-Shawaf M.<sup>1</sup> Bottcher B<sup>2</sup>

1) Medical Student at the Islamic University, Gaza

2) Lecturer at the Islamic University, Gaza

## Background

The Royal College of Obstetricians and Gynaecologists (RCOG) defines ectopic pregnancy as fertilized embryo implanted outside the uterine cavity. Globally, ectopic pregnancy occurs in 1-2 % of all conceptions and it is the leading cause of maternal mortality worldwide (13%).

## Objective

To assess and improve the management of ectopic pregnancy at the Emiratiy Maternity Hospital (EMH) in Rafah, Gaza Strip.

## Methods

Documented cases of ectopic pregnancy were identified in the ten months from January to October 2015. A retrospective review of 20 case notes was conducted and the results compared with global standards for management of ectopic pregnancy according to Royal College of Obstetricians and Gynaecologists (RCOG) guidelines. Data on presentation, diagnosis and management results and attendance of senior doctors were included in this audit.

## Results

The greatest difficulty was to initially identify the cases of ectopic pregnancy, with only 23 cases found in these 10 months. This reflects an incidence of 0.59%, compared to 1-2% globally.

The age range was between 20-39 years. Of these 30% had a history of previous abortion and 25% were primigravida. The gestational age was between 5-7 weeks. In 70% bleeding was the main presentation, accompanied by pain in 20% and the rest was not documented.

The diagnosis was made in 20% by ultrasound + B-HCG, in 35% by ultrasound only, and in 35% with serial B-HCG levels.

55% of patients were managed with expectant management, 40% with medical management, and 5% with surgical management. However, only 25% of cases followed guidelines in the management and considered the B-HCG value in their decision.

As seen in other audits, clinical documentation was here too significantly below standard.

### Interpretation

Major deficiencies were identified in the management of ectopic pregnancies with non-adherence to clinical guidelines. Striking was the fact that B-hCG levels were frequently ignored in the choice of management with 20% undergoing expectant and medical management at a B-hCG level above the recommended level. This poses a risk of major complications for patients. Therefore, this audit demonstrates the need for the development of local guidelines along with a culture of implementation and adherence to these guidelines. As a cornerstone for the development of a culture of adherence to local guideline as well as patient safety, systematic clinical audit is mandatory.

As shown in other audit projects (1,2), major shortfalls were found in documentation as well as coding practices. In order to establish systematic clinical audit, medical documentation has to be improved significantly in all hospitals across the Gaza-Strip.

### Reference

1

AbuSam :h S et al (2015) The Good, the Bad and the Lack of : Documentation: A Clinical Audit on Management of Postpartum Haemorrhage. Unpublished Results.

2

Abukhalil M et al. (2016) Emergency caesarean deliveries in the Gaza Strip:A clinical care audit of delivered care.  
DOI:10.13140/RG.2.1.1184.5369

# **Antibiotic prophylaxis in caesarean section at Al-Helal Al-Emirati Hospital (Al-HEH), Gaza Strip, Palestine: A clinical audit**

Alyacoubi, S; Bottcher, B; Elessi, K

Islamic University of Gaza, Gaza Strip, Occupied Palestinian Territory

## **Background**

Nowadays, there is a general consensus among the current best guidelines about the procedural aspects of antibiotic prophylaxis in Caesarean Section (CS). Clinical audit, which has never been done before in the Gaza strip, is a tool of quality control used worldwide for healthcare improvement and is aimed at assessing clinicians' and other clinical staffs' adherence to the applicable guidelines.

## **Objective**

This study was undertaken to audit the use of antibiotic prophylaxis in CS at Al-HEH, Gaza Strip, Palestine.

## **Methods**

A sample of 38 cases was selected randomly among all the women who underwent CS during the period from 22 March 2015 to 16 April 2015. Using SPSS program, data were analysed for age, type of CS, whether they received antibiotics or not, type of antibiotics, and timing of its administration.

## **Results**

Of the total 38 patients, urgent CS was carried out in 31.57% of cases while the procedure was elective in 68.42%. Antibiotic prophylaxis was given in 60.53% of cases before the surgery while no prophylaxis was received by the rest. Using Chi-Square Statistic, it was found that the correlation between the type of CS and the decision of prescribing antibiotics before the surgery to be statistically significant ( $P = 0.02$ ). Moreover, 81.58% of cases were found to have received antibiotics after the surgery and a lack of uniformity of the antibiotics given to this group was also noted.

## Interpretation

This study indicates that clinicians at Al-HEH do not follow evidence-based practice regarding antibiotic prophylaxis when managing CS patients. Moreover, the non-justified use of antibiotics again in many of those who received antibiotics before and the lack of uniformity of the antibiotics given to this group represent an unaccepted clinical practice.

This audit, being the first to be done in the Gaza strip, highlights the effectiveness as well as the importance of clinical audit in identifying areas of weakness in our healthcare system. In view of this, a Clinical Practice Guideline for the use of antibiotic prophylaxis in CS was issued and implemented, to be followed up with a re-audit in 6 months.

[www.onlinelibrary.wiley.com/wol1/doi/10.1111/1471-0528.14115/full#bjo14115-sec-0007](http://www.onlinelibrary.wiley.com/wol1/doi/10.1111/1471-0528.14115/full#bjo14115-sec-0007)

# Management of Patients Presenting with Exacerbation of COPD: A Clinical Audit at Nasser Hospital , Gaza Strip, Palestine

Elmassry<sup>1</sup>, A; Böttcher, B<sup>2</sup>; Abu Auda,Y<sup>4</sup> Al-Faqawi<sup>3</sup>, M;

1) Consultant Physician, Infection Control Specialist, Nasser Hospital, Khan Younis, Gaza

2) Research & Clinical Audit Director, Faculty of Medicine, Islamic University, Gaza

3) Student, Faculty of Medicine, Islamic University, Gaza

## Background

The frequency and severity of COPD exacerbations seem to be the most important outcome measure determining overall prognosis in COPD. COPD Patients suffer one to four exacerbations per year, the management approach of these exacerbations can affect patient's clinical progress as well as health related quality of life and the risk of hospital admissions. Recently, the approach to COPD exacerbations changed dramatically. Good evidence now supports the use of corticosteroids for exacerbations as well as bronchodilators. These can improve outcomes for COPD exacerbations.

## Aim and Objective

This audit aims to improve the care received by patients presenting with COPD exacerbations. It assesses the current practice in the Management of COPD exacerbations at Nasser Hospital and compares this to standard that were based on the Global Initiative for Chronic Obstructive Lung Disease Guideline (2015).

## Methods

The sample was selected retrospectively and randomly from the patients who were admitted to the Nasser Hospital with the main diagnosis of COPD exacerbation in the period between 2014 to 2016. Data collection sheets were used to collect the data from patient files.

## Results

In total, 68 patients were identified for this audit. 13 of these were excluded for recording issues. The final case number included was 55.

The mean age was 66.4 years and 98.2% were male. Only 12.7% of patients had ABGs, of these 85.4% presented with severe exacerbations. All patients received inhaled bronchodilators, of these 64.4% received short acting beta-agonists (SABA), 78% short-acting muscarinic agonists (SAMA), 23.6% long-acting muscarinic agonists (LAMA), 1.8% long-acting beta-agonists (LABA) and 40% both SABA and SAMA. A total of 96.4% patients received systemic corticosteroids. 78.2% of patients took 75mg Prednisolone daily. 21.8% of inpatients received Prednisolone for 5 days, as recommended. While the majority received a shorter course. On discharge, patients received no corticosteroids or mainly 10mg for 5 days. Other treatments given included 92.7% had oxygen, 100% antibiotics, 5.5% antiviral medication and 3.6% theophylline. NO patient received SABA-SC or chest physiotherapy.

### **Interpretation**

Overall adherence to guidelines was moderately good. All patients received antibiotics and 94.7% oxygen, which are both recommended for all patients. Chest physiotherapy was not advocated, which is known to be ineffective for this indication. Less useful therapies were also rarely prescribed. However, some areas showed poor adherence and this might be due to a lack of awareness of recent evidence. Firstly, more patients received SAMA than SABA, although SABA are more effective and therefore the first line treatment for COPD exacerbation. 96.4% of patients received systemic corticosteroids. However, the mostly prescribed dose (75mg Prednisolone) exceeds the recommendation, which is 40mg for 5 days. Generally, awareness and adherence to clinical guidelines has to be improved. This goes hand in hand with fostering evidence based medicine across the Gaza-Strip. As other audit projects, this one also found documentation to be of a very poor standard. This is in urgent need of improvement across Gaza, in order to foster a meaningful audit culture.

# An audit of inpatient management of community - acquired pneumonia (CAP) at the European Gaza Hospital(EGH) Gaza Strip, Palestine: A comparison with the best evidence

Alyacoubi, S1; Abuowda, Y1; Albarqouni, L2; Bottcher, B3; Elessi, K3

- 1 Intern Doctors, Ministry of Health
- 2 Doctoral Candidate, CREBP, Australia
- 3 Assistant Professors, Faculty of medicine, Islamic University of Gaza.

## Background

In community-acquired pneumonia (CAP); severity-of-illness scores such as the CURB-65 criteria can be used to guide the decision regarding the most appropriate site-of-care. For patients with moderate- or high-severity CAP; taking blood and sputum cultures is recommended. Early and adequate empirical antibiotic treatment is important, since mortality rates are higher in patients who are inadequately treated.

## Objective

To evaluate the quality of care provided to the patients and compare it with the best available evidence.

## Methods

Medical records of all patients admitted to the EGH with a diagnosis of CAP during the period from December 1, 2015 to March 31, 2016 were reviewed retrospectively. Current clinical practice was compared with the best current evidence as found in the NICE guidance and the American thoracic society (ATS) guidelines for the severity assessment and management of CAP.

## Results

A total of 141 cases diagnosed with CAP were admitted during the study period. Records of 41 cases (29%) were missing or couldn't be retrieved. The mean age of patients was  $55.9 \pm 20.2$ . CURB-65 severity score could be calculated for only 12% of patients.

Blood urea nitrogen (BUN) and respiratory rate (RR) were not documented in 48% and 73% of patients, respectively. No microbiological testing was done except for two patients. Although 18 different antibiotic regimens were used, 81% of patients received a  $\beta$ -Lactam plus macrolide combination therapy, given alone (49%) or with the addition of other different antibiotics (32%), which is the recommended regime of empirical antibiotics for patients hospitalized with CAP. About 43% and 41% of patients received anti-viral oseltamivir and corticosteroids, respectively.

### **Conclusion**

There was a very poor adherence to the current standards of care for the severity assessment and management of CAP. Moreover, the wide range of different antibiotic regimes used, not guided by the results of microbiological testing, represents an inappropriate clinical practice and increases the risk for development of antibiotic resistance. The development and implementation of a local clinical practice guideline may lead to more successful implementation of the best evidence. Furthermore, the documentation system needs to be improved as good documentation is an essential cornerstone in the process of patient safety, continuity of care as well as effectiveness of clinical auditing.

# Informed Consent for Elective Surgery in the Gaza strip: Patients' Satisfaction with Doctors' Communication

Elifranji<sup>1</sup>, Z; Elifranji<sup>2</sup>, M; Eid<sup>1</sup>, M; Naim<sup>1</sup>, A; Elessi, K<sup>1</sup>

1) Faculty of Medicine, Islamic University, Gaza.

2) Department of Surgery, Hamad Medical Corporation, Qatar,

## Background

Widespread dissatisfaction and mistrust exists among patients in the Gaza Strip towards doctors. A sense of a lack of sufficient information regarding diagnosis, risks and benefits of interventions and subsequent management plans is present among patients. All of these areas are considered essential components in the surgical consent process. A gap between patients' actual understanding and that perceived by doctors has been shown to exist in different settings (1). But no study has been done of this in the Gaza-Strip.

## Objective

This study aims to assess the satisfaction of patients in Gaza with the information provided to them during the consent process prior to an invasive procedure and compare this to the current practice and attitudes of surgeons.

## Methods

A five-section self-designed questionnaire was administered using convenience sampling to the first 60 patients and first 60 surgeons who met the selection criteria in the two hospitals in the Gaza Strip: Al-Shifa Hospital and the European Gaza Hospital.

## Findings

Among the surgeons surveyed, 55% answered that informed consent should be obtained by doctors only, 3% thought that it can be obtained by nurses only, while 45% stipulated either doctors or nurses can obtain it. In total only 38% of those healthcare professionals taking the consent from the patient, actually performed the procedure. During consent procedures, 73% of surgeons reported providing written documents 30% drawings explaining the procedure, 3% giving videos or animations and 8% suggesting website links for more information.

The survey of patients revealed that only 25% of surveyed surgeons identified themselves to their patients, and 12% asked for the patients' signature without a complete discussion of the intervention. Around 35% of surgeons depended on verbal communication only.

Surgeons identified barriers for best practice as time constraints, as well as lack of hospital policies and informational resources. However, 87% of surgeons believed that informed consent has an impact on patient wellbeing.

A total of 90% of surveyed patients thought they received the right treatment and were satisfied. While 43% of patients prefer to travel overseas to get treatment, 77% of these because of a perceived lack of medical equipment and facilities.

### Interpretation

Most surgeons don't follow the standardized procedure for informed consent due to a lack of support for informed consent, as well as materials necessary to facilitate it. Yet, they believe that informed consent affects patient wellbeing. This discrepancy demonstrates an urgent need to improve informed consent procedures in Gaza. Despite a majority of patients expressing a preference for treatment abroad, most of them were satisfied with the treatment they received in Gaza. Therefore, a further study is required to determine the impact of the identified shortcomings on clinical outcome.

### Reference

1

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# Management of Pregnancy Loss in the First Trimester: An Audit

R. Musallam<sup>1</sup>, R. Al-Halol<sup>1</sup>, N. Salem<sup>1</sup>, H. AL-Deeb<sup>1</sup>, B. Bottcher<sup>2</sup>,  
H. Al-Hamaida<sup>3</sup>

- 1) 5th Year Medical Students at the Islamic University of Gaza
- 2) Assistant Professor, Islamic University, Gaza
- 3) Department of Obstetrics and Gynecology, Emirati Obstetric Hospital

## Background

Early pregnancy loss is common, occurring in 10 % of all clinically recognized pregnancies.

Approximately 80 % of all cases of pregnancy loss occur within the first trimester.

No prior audit about this subject at Emirati Obstetric Hospital was done. This audit has gained approval by administration of Emirati Obstetric Hospital – Gaza.

## Aim

This audit aims to assess the management of Pregnancy Loss in the first Trimester and compare this to the current practice in Emirati Obstetric Hospital with American college of obstetricians and Gynecologists guidelines (ACOG), No. 150 May 2015.

## Methods

All case notes of patients presenting with first trimester pregnancy loss during the time of 8/11/2015 to 31/12/2015 were reviewed for type of abortion, management, complications, aftercare and success.

## Results

From the total of 50 cases, 32 were missed abortions, 13 incomplete and 5 complete abortions.

All cases were hemodynamically stable.

The management included 14% medical, 4% surgical and 82% surgical management after medical management failure.

Only 7 (14%) cases were managed by medical management alone. For medical management,

200 $\mu$ g Misoprostol was given 4 times sublingually without repeat of the dose.

A total of 43 (86%) cases were treated by surgical management (E&C). Of

- 2 cases (4%) were treated without prior Misopristol
- 41 cases (82%) were treated after failure of medical management (3/4) or complicated by bleeding (1/4)

The majority received antibiotic prophylaxis after surgical management, although this is not indicated. Only 14% received no antibiotics at all, 11% were given Cefexime, 14% Doxycycline, 27% Metronidazole + Ciprofloxacin, 13% Cefazoline, 18% Cefuroxime and 3% Clindamycin.

**Expectant management** did not require admission and therefore these cases were not recorded in this audit.

### **Discussion and Recommendations**

This audit showed a number of weaknesses in the management of early pregnancy loss, mainly due to the lack of clear guidelines on this topic. The following recommendations are drawn from the findings in this audit:

- Creation of clear guidelines for management of first trimester pregnancy loss.
- Clear separation of medical management from surgical management.
- Improvement of the regime of medical management in order to reduce the high percentage of failure in the current regime. ACOG recommendation has a success rate 71% with one dose of 800 $\mu$  misopristol and 83% with repeat the dose. This should be adopted in the hospital guidelines
- Antibiotic use should be limited to high risk cases or current clinical infections.
- Regular audit to ensure good clinical practice and reaudit.

# Management of Premature Rupture of Membranes at Term: An Audit of Local Guidelines.

I. Saleh<sup>1</sup>, M. Alnajjar<sup>1</sup>, A. AbuJedian<sup>1</sup>, Y. Alghazali<sup>1</sup>, M. Adam<sup>1</sup>, B. Bottcher<sup>2</sup>, A. Qeshta<sup>3</sup>

**1** 5th Year Medical Students at the Islamic University of Gaza

**2** Guest Lecturer at the Islamic University of Gaza

**3** Department of Obstetrics and Gynecology, Emirati Obstetrics Hospital

## Background

Premature rupture of membranes (PROM) is a common clinical event. It is associated with increased maternal and perinatal morbidity and mortality. Clinical practice guidelines have been developed in Palestine and are followed at Emirati Hospital since 2006. No prior audit about the management of PROM at Emirati Obstetrics Hospital (EOH) was done.

## Objectives

This audit assesses the management of women presenting with PROM at term and assess how inpatient management compares with the hospital's current clinical practice guideline.

## Methods

A retrospective audit was performed over a 2.5 month period from 1st October 2015 to 15th December 2015. A total of 50 cases were collected, including data about maternal history, examination, obstetric procedures, fetal monitoring techniques, lab investigations, pharmacological treatment, delivery details as well as maternal and fetal outcome.

A data collection sheet was designed according to the Palestinian Ministry of Health Clinical Practice Guidelines for Obstetrics and Gynecology, published in 2006.

Data was collected from the archive department of EOH.

## Results

All patients had vital signs, abdominal examination, CBC and CTG recorded. Sterile speculum and AFI were not documented although Dr. Qeshta stated that they were routinely performed.

High vaginal swabs (HVS) were not done due to the lack of resources. Mid stream urine tests (MSU) were not done, because of a lack of cost effectiveness, although this is still mentioned as a required investigation in the current national guidelines. Per vaginal examinations were done with no justification although these are not routinely indicated.

In this audit 24% received Cefazolin as treatment, which is not suggested in the guidelines. Furthermore, antibiotic treatment should only be given with specific indications or in cases of prolonged rupture of the membranes.

The majority of patients (78%) were admitted for > 6 days, 20% for < 6 days and only 2% were not admitted.

## Discussion

This audit shows a high degree of ignorance towards existing clinical guidelines, in some aspects willful violation. Contributing to this is the fact that an update of the clinical guideline was unavailable to clinicians. This audit reveals the need for regular updates to current guidelines as well as fostering evidence based medicine and adherence to clinical guidelines.

## Recommendations

- ① Development and implementation of an effective supervision and training system to improve adherence to the clinical guidelines.
- ② Update of current clinical practice guidelines with inclusion of only cost effective investigation.
- ③ Improvement of the documentation process, eg, regular seminars and use of an established format for ultrasound examination.
- ④ Regular audits to ensure sustainability and continuous quality improvement in healthcare.
- ⑤ A further audit to examine reasons for admission and ways to reduce the percentage of admissions in order to reduce costs.

# An Age Old Problem: Pain management in labour(PML): A Clinical Audit at El-Emarati Hospital-Gaza(EEH)

Reem Yahia Dabbour<sup>1</sup>, Tayseer Awad Hassan<sup>1</sup> , Maha Sadaat Faqawi<sup>1</sup>,

Dr Bettina Böttcher<sup>2</sup>

**1** 5th Year student at the Islamic University in Gaza

**2** Assistant Professor at the Islamic University in Gaza

## Background

Pain is the oldest medical problem and the universal physical affliction of mankind. It has been a part of childbirth for this time. Over the last 100 years and especially recent decades, a multitude of different methods for management of pain in labour have become available to women. However, no guideline exists in the Emirati Hospital to help staff and patients benefit from these recent developments.

## Aim

The aim of this audit is to assess the practice of pain management in labour at El-Emarati Hospital in Rafah in the Gaza-Strip and compare this to the NICE guidelines.

## Objectives

In particular the following points are to be looked at:

- 1** What are the available strategies used in PML in EEH?
- 2** Are the patients informed about those strategies?
- 3** Are the patients informed about the side effects of the strategies used?
- 4** Do patients ask for specific strategies?

## Methods

A data collection sheet was prepared and filled in for each patient admitted to the delivery room. All patients were included consecutively from 1st February 2016 to 1st April 2016.

Data collection sheets were completed by the audit team or, if not available, by the medical staff on labour ward. Altogether, 50 patients were included in the audit.

The NICE guidelines were used as the standards and the data collection sheet had been prepared according to them.

## Results

From the total of 50 patients, 22 were primigravidae and 28 multigravidae.

All patients had received at least one or more of non-pharmacological management methods. 100% (50 cases) of them were managed by breathing and relaxing techniques, 70% (35 cases) received abdominal massage, but no patient received Entonox (Inhalation analgesia to be used with each contraction).

40% (20 cases) of patients were managed pharmacologically. But no patient was informed before about the availability or the side effects of the drugs used.

Finally, none of the patients was offered or received regional anaesthesia for pain management during labour

## Discussion

There is a significant shortfall in the management of pain during labour, especially as many options and techniques are not used or offered to the patients. Another weakness found was the limited discussion and lack of choice available to patients with regard to the use of pain relief. As pain is a highly subjective experience and varies greatly between patients, so does the preference for use of pain relief. This should be reflected in practice.

## Recommendations

- 1 Inform all patients about the methods available.
- 2 Explain any expected side effects of the drugs used.
- 3 Provision of an approved reliable protocol in order to make the management easier and more accessible to different practitioners on labour ward.
- 4 Consider the use of regional anesthesia during labour.

# **Patient Satisfaction as a Quality Indicator: a Cross-Sectional Study among Outpatients in the Gaza-Strip**

E. Elrayes, K. Elessi, A. Abukaresh , H. Habeeb , M. Ashour

- 1 5th year medical students, Islamic University of Gaza
- 2 Assistant professor, faculty of medicine, Islamic University of Gaza

## **Background**

Patient satisfaction is an important factor in assessment of the quality of health care services. Worldwide fulfillment of patient expectations should be one of the main targets for health care services. To achieve this goal, patient satisfaction studies offer significant information to guide health care policy makers' future plans and decisions.

## **Objective**

This study measures the extent of patients satisfaction about healthcare services provided at the Palestinian Ministry of health outpatient departments. It is the intention to find the effect of patient's demographics on their overall satisfaction and to identify the key factors that affect their satisfaction. Furthermore, it looks to assess how these key factors are rated by patients.

## **Methods**

An observational cross sectional study using convenience sampling, where every eligible and consented respondent was interviewed by a team of data collectors using a questionnaire that included patient's demographics, overall satisfaction as well as satisfaction about: ease of access, waiting time, communications skills of physician, quality of consultation and completeness of management plan.

## **Results**

The study population consisted of 500 respondents from each of the five main governmental hospitals. Overall satisfaction was 67.2% . There was a significant association between the overall satisfaction and factors such as age, residency, different hospitals, health status and number of visits. Also each of the proposed key factors was significantly associated with overall satisfaction.

This study revealed shortcomings in the ease of access especially the waiting time and the appropriateness of clinics place, which could be hard to reach for patients.

However, there was no significant shortcomings in doctor communication skills except in physicians introducing themselves. There was only a mild degree of dissatisfaction with the quality of consultations, especially in physicians performing full physical exam, privacy of patient during examination and interruption of the consultation.

Lastly there was a defect in the adequacy of the completeness of management plans, especially in patient education regarding their illnesses. Furthermore, the need of prescribed medications, their possible side effects and benefits of invasive procedures was not clarified sufficiently with patients in 50.2% of cases.

### **Interpretation**

Overall satisfaction with the health service is similar to national and international levels. Furthermore, factors such as age, residency, different hospitals, health status and number of visits significantly influence patient satisfaction possibly as an expression of differing experience and expectations.

Generally, Doctors in Gaza still have a definite need for improvement in patient education, especially in explaining treatment options with benefits and risks to patients and ensuring their understanding.

However, this is a key skill in establishing informed consent and including patients as part of the healthcare team. The inclusion of patients in treatment decisions promotes patient safety as well as adherence to treatment. Therefore, this is an important issue to address in order to improve healthcare services in Gaza.

# Prophylactic Antibiotics for Wounds at EGH: A Clinical Audit

Samah Afana<sup>1</sup>, Maysoon Al-Hindawi<sup>1</sup>, Hassan Zaiter<sup>2</sup>, Bettina Bottcher<sup>1</sup>,

<sup>1</sup> Faculty of Medicine, Islamic University of Gaza, Palestine

<sup>2</sup> Emergency Department, European Gaza Hospital, Palestine

## Background

Skin wounds and injuries are a common encounter in the emergency department. Generally, you have two types of patients presenting with skin wounds. Children with accidental injuries and adults with conflict related injuries. Such wounds could be clean or not and no local guideline exists to address the question of when antibiotics should be prescribed in Palestinian hospitals. According to the most recent WHO guidelines for wound care, prophylactic antibiotics are indicated in wounds that are larger than 5 cm or foot and hand injuries. Overuse of antibiotics increases the risk of antibiotic resistance and poses a great risk for antibiotic effectiveness in the future. Therefore, finding the right balance of use is of great importance.

## Objective

The purpose of this audit is to evaluate the current practices regarding the prescription of antibiotics for skin wounds after suturing and understand possible factors to affect such a decision in European Gaza Hospital and to compare with the currently published guideline by WHO.

## Methods

A formal simple questionnaire was used by medical students currently at the emergency department at European Gaza Hospital (EGH) in Gaza. The questionnaire included demographic questions about age, gender, and address. Additionally, the wound's size, and type of antibiotics if were prescribed, were noted.

## Results

50 patients were included in this study, with 32 males and 18 females. Average age was 12. The mean size of the sutured wound was significantly larger for the patients who got antibiotics (4.69 vs 2.00, p-value = 0.0001).

Fisher's exact test was used to study gender as a factor for prescribing antibiotics, with female gender being a significant determinant ( $p$ -value = 0.005). The site of the wound was not a significant factor in our analysis most likely due to a small number of patients in each subgroup.

Finally, we found that patients who received Cefalexin were significantly younger than those who received Amoxicillin + Clavulonic acid. These were the only two antibiotics prescribed for prophylaxis in our study.

### **Interpretation**

The decision to prescribe antibiotics at EGH is highly dependent on the suture's size. The fact that 97% of female patients received antibiotics points towards a subjective decision that is based on a common belief among Palestinians that antibiotics would result in a faster scarless healing process. Our findings suggest that the decision to prescribe prophylactic antibiotics for wounds at EGH is partly evidence based as they were reserved for wounds larger than 4.6 cm. Further exploration of our data suggested that the wounds encountered in the female group are larger in size which could explain in part why antibiotics were used more often in that particular group. Regardless, the development of a local guideline for the use of antibiotics should be a priority for the Palestinian hospitals to make quality control studies a possibility in the future.

# Ischemic Stroke Management At Al-Shifa Hospital, Gaza: A Clinical AUDIT of Delivered Care

Abukaresh, A, Abadllah, R, Bottcher, B, Khamis, E

- 1) 6th year medical student, Islamic University of Gaza
- 2) Assistant professors, faculty of medicine, Islamic University of Gaza

## Background

The Palestinian annual health report ranked cerebrovascular Accident (CVA) as the 3rd leading cause of death in Palestine. Globally, it is also one of the most common causes of disability and functional limitation. Good management not only decreases mortality, morbidity and disability rates, but also improves the functional outcome of the patient, thereby decreasing the national expenses.

## Aim and Objectives

The aim of this audit was to assess the current management of patients with ischemic stroke and compare it with international evidence-based guidelines and available local possibilities.

The specific objectives were:

- To assess the current documentation level
- To assess the diagnostic techniques used at Al-shifa hospital. .
- To compare our local practice with the American stroke association . guidelines, 2013.

## Methods

55 files of patients admitted to Al-Shifa Hospital with the diagnosis of ischemic CVA were selected randomly in the time from January to June 2016. These files were reviewed and data collection sheets completed.

## Results

ICD coding in patient files was relatively good with 92% of files correctly coded. However, there was a significant weakness, when it comes to documentation in patient files. Documentation of details.

such as duration & progression of symptoms (documented in 20% of files only), the physiotherapy assessment as well as subsequent management were generally poor.

The audit also revealed that most of the essential acute investigations were done on time (100% for blood count, renal function tests and CT scan and 76% for ECG). However, thrombolytic agents were not used as they were usually unavailable in Gaza hospitals. Long term antiplatelet therapy was given on discharge according to the American stroke association guidelines in 92%. However, the immediate dosages of antiplatelet therapy administered to most patients were generally lower than the international recommendations. Findings also demonstrated a marked deviation of blood pressure management from the guideline especially regarding the decision to treat and choice of antihypertensive agent. Only, five patients received prophylactic DVT anticoagulation (< 10%) and only one complication was documented, which was a UTI.

### **Conclusions and Recommendations**

No local guideline exists for management of patients presenting with ischemic stroke in Gaza. This is despite the fact that expedient and expert management can make a big difference in the outcome of ischemic stroke. Furthermore, the lack of availability of thrombolysis as well as the poor dosing of anticoagulation and deviation in blood pressure management show a lack of evidence based practice in this area. This audit demonstrates the urgent need for the development of a local evidence based guideline, which is best implemented in a directly accessible stroke unit to expedite expert care for patients.

Further recommendations include:

- Provision of thrombolytic therapy.
- Improvement of documentation.
- Re-audit following implementation of above recommendations and circulation. of an evidence based local guideline.

Corresponding author e-mail : amir-jwad@hotmail.com

# Use of Antibiotics in Uncomplicated Lacerations: Time to Look at the Evidence

Al-Faqawi<sup>1</sup>, M; Elmassry<sup>2</sup>, A; Böttcher, B<sup>3</sup>

- 1 Student, Faculty of Medicine, Islamic University, Gaza
- 2 Consultant Physician, Infection Control Specialist, Nasser Hospital, Khan Younis, Gaza
- 3 Research & Clinical Audit Director, Faculty of Medicine, Islamic University,

## Background

The purpose of this audit is to focus on one of the reasons that lead to increasing antimicrobial resistance, which has been a growing concern.

Lacerations are among the most common complaints resulting in emergency department visits, and antibiotics are always used to prevent wound infections. However, the best way to prevent wound infection is thorough wound cleansing and appropriate closure techniques.

Clinical studies do not support routine antibiotic prophylaxis in simple wounds. This audit was designed to examine the antibiotic-prescribing practices and the association of these practices with the complexity of lacerations, patients and physicians factors, and presenting times after injury. We also examined factors that may contribute to patient satisfaction.

## Aim and Objectives

This audit aims to improve the care received by patients with lacerations. Specific objectives of this audit were the assessment of current antibiotic prescribing practice for patients with uncomplicated lacerations at Nasser Hospital as well as the comparison of these to best medical practice.

## Methods

The sample was selected randomly from the patients presenting to the surgical emergency room with a laceration from 1st March to 14th March 2016. A data collection sheet was completed prospectively and included:

- 1 patient's age, brief medical history, characteristics of the injury (site, time of presentation).

2 Patients were asked about their beliefs regarding the importance of antibiotics in the management of their uncomplicated laceration.

During the same timeframe, all practitioners were asked to complete a questionnaire regarding their practice.

## Results

In total, 73 patients were included in the study, 13 had to be excluded as they presented with complicated lacerations and nine physicians completed the questionnaire.

At Nasser Hospital surgical ER, lacerations were among the most common primary diagnosis groups. The mean age was 14.5 years and patients were predominantly male (85%).

The majority (98.8%) presented within the first hour following their injury. 61.6% of patients had face and head injuries. Most lacerations (98.8%) were closed by sutures. The majority of patients (95%) received good irrigation and cleaning for their injuries before sutures. Only 2.2% of patients presented to the ED more than 18 hours after their injury. Their wounds were left open.

Striking was that 100% of patients who had sutures also received antibiotic prescriptions, most commonly Ampicillin & Flucloxacillin (known as Megacare) for a five day course. The type of antibiotics was used regardless of wound length or site.

86.6% of patients believed that antibiotics accelerate wound healing and are necessary even in uncomplicated lacerations.

## Discussion and Recommendations

This audit reveals a striking lack of evidence based practice in the prescription of antibiotics. Both surgeons and patients are unaware of recent evidence for the use of antibiotics in practice. Therefore, an urgent need exists for education of both healthcare providers and patients with regard to antibiotic use. The development of a local guideline will expedite improvements in patient care as well as facilitate the evidence based use of antibiotics. A re-audit should be completed after 6 months from this action.

# Management of Urinary Tract Infections in pregnancy: A Clinical Practice Audit with Impact

Huda Abunemer<sup>1</sup>, Afnan AbuMousa<sup>1</sup>, Reem AlHallaq<sup>1</sup>, Nehal AbuWarda<sup>1</sup>, NedaAlhertani<sup>1</sup>, Dr Bettina Böttcher<sup>2</sup>

**1** Medical students at Islamic University, Gaza

**2** Assistant Professor at the Islamic University, Gaza

## Background

Urinary Tract Infections (UTIs) are among the most common bacterial infections during pregnancy. 20% to 30% of women have at least one UTI during their lifetime, and 20% develop recurrent infections. Ninety-five percent of UTIs are symptomatic, Untreated upper UTIs are associated with low birth weight, prematurity, premature labor and hypertension.

## Aim and Objectives

The aim of this audit was to improve the care provided to pregnant women with UTI and prevent complications. Specific objectives were to examine the diagnosis and management at Al-Emirati Hospital of UTI in pregnancy. No local guideline exists for comparison, therefore the American college guidelines were used as a standard.

## Methods

All women admitted to Emirati Hospital with UTI in the time from 4th January 2016 to 2nd March 2016 were reviewed. A data collection sheet had been designed and was filled in for each of these cases. The data were analyzed with simple descriptive statistical analysis.

## Results

60 cases were included in the audit, from these 18.3% were in the 1st trimester, 25% in the 2nd trimester, and 56.7% in the 3rd trimester.

The Chief complaint was flank pain in 78.3%, nausea and vomiting in 23.3%, while 21.7% had fever and 15% complained of dysuria.

Two cases (3.3%) were admitted without clinical need for admission, while the majority of cases was treated with IV antibiotics, which were mostly 2nd generation cephalosporin. A wide variation existed in the antibiotics used for treatment, which was not informed by urine culture results.

Altogether, in 10% of cases cultures were requested, but only 3 out of 60 were actually done. This appeared to be due to a weakness in follow up and documentation of results after shift handover. However, 100% of cases had CBC and Urinalysis and 75.9% had renal function tests done.

The follow up of patients after treatment was extremely poor, with no patient having a repeat urine culture after two weeks of management.

### **Interpretation**

The extent of variation in antibiotic use as well as frequent use of IV antibiotics without clear clinical indication is an expression of the fact that a local guideline for this common condition was not available at the time of this audit. Following this audit, the department has written a guideline for the management of UTI, which is a major step into the direction of implementation of the process of systematic clinical audit in the Gaza-Strip. It is evidence of the motivation and willingness among healthcare professionals to improve healthcare services in Gaza despite the difficult situation.

Further recommendations include:

- Significant improvement of medical record keeping.
- Follow up of patients and requested investigations, including their documentation and handover if not available during the shift.
- Re-audit in six months to see if the new guideline is followed.

# Vaginal Birth After Cesarean Section (VBAC): A Clinical Audit at Al-Helal Al-Emirati Hospital (Al-HEH) in Gaza Strip

Alaloul E1; Alhelu, A1; Baraka, E1; Elshami, M1; Albuhaiisi, A1, Böttcher B2

1 Student, Faculty of Medicine, Islamic University, Gaza

2 Assistant Professor, Islamic University, Gaza

## Background

The rising rate of primary cesarean delivery has led to an increase in the proportion of women who have had a previous cesarean procedure. Pregnant women with previous cesarean delivery might be offered either planned vaginal birth after cesarean (VBAC) or an elective repeat cesarean. Planned VBAC is appropriate for and may be offered to the majority of women with a singleton pregnancy of cephalic presentation at 37+0 weeks or beyond who have had a single previous lower segment caesarean delivery, with or without a history of previous vaginal birth.

## Objective

The objective of this audit, was to determine the success rate of VBAC at Al-Helal Emirati Obstetric Hospital (Al-HEH), Gaza Strip.

## Methods

This is a descriptive retrospective clinical audit using data collection sheets that were filled based on the available information from patients' files during February and March, 2016 at Al-HEH. The data collection sheet consisted of 4 different domains which are: sociodemographic data, history of previous vaginal deliveries, details of previous CS, and details of current delivery.

## Results

Of 150 patient-case files identified, 112 were excluded due to very poor documentation. The mean age was 28 years.

Out of 38 selected cases, 53% were primiparous, 39% were multiparous and 8% were grand multiparous. In addition, 47% have had their previous LSCS before 1-2yr, 39% before  $\geq 3$  year, 11%  $\leq 1$  year and 3% were not documented. The majority (29 cases; 76.3%) have had repeat

LSCS, among them, 31% were delivered as emergencies.

Surprisingly, general anesthesia was used in 29% of these cases, while 68% of them used spinal anesthesia, and only 3% used epidural anesthesia.

The remainder (9 cases; 23.7%) had successful VBAC, where 18% had an induction of labor and none of them had an instrumental delivery.

### **Conclusions and Recommendations**

The success rate for VBAC was extremely low (24%). This is far below the expected rate of 70% (RCOG guidelines), despite the fact that 40% of women also had one or more previous vaginal deliveries. This underlines the statement by the Royal College of Obstetricians and Gynecologists (RCOG) that the predictive ability of VBAC for women with a previous vaginal delivery remains poor (VBAC Guidelines, RCOG, 2015).

However, this audit suffered from the extremely poor documentation in the medical notes. Invariably, this led to an inability to examine the contributing reasons for the very low success rate in VBAC. Therefore, improvements in documentation should be the first priority to enable further audit and studies in this area. Appropriate counseling of women regarding mode of delivery after one LSCS is also essential to avoid repeat LSCS for 'maternal request'. Furthermore, this audit is one of the first completed in the Gaza-Strip. It highlights the importance of systematic clinical audit for improvement of the health care system. A further look at the causes for the extremely low success rate in VBAC is mandatory in order to improve success.